

PLANTWEB ADVISOR FOR METROLOGY

Managing Coriolis Meter Uncertainty

Plantweb Advisor for Metrology Functionality

Plantweb Advisor for Metrology is Emerson's new modular analytics platform. It is built upon the latest technologies, providing a suite of functions and flexibility that are unprecedented within the measurement world today. This next-generation platform provides a level of standardization and automation of complex tasks that integrate seamlessly across measurement assets and engineering support locations.

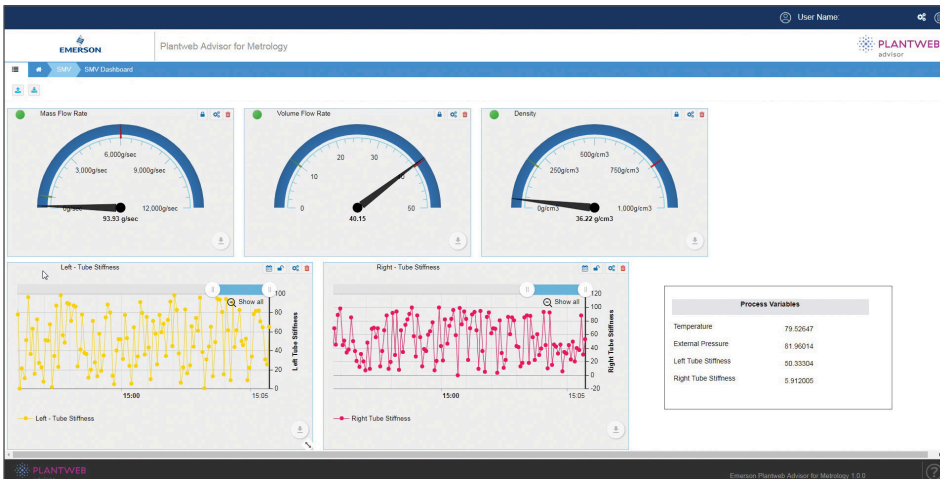
The enhanced diagnostic, remote monitoring, predictive capabilities and validation provide greater insight into both process and instrumentation, driving clarity and reducing financial exposure and risk.

Coriolis Smart Meter Verification Module

Having an automated, online tool, provides an added degree of confidence in the performance of the device.



Smart Meter Verification checks the entire Coriolis meter performance and provides custom test reports.



Customizable Coriolis dashboard

For more information, visit Emerson.com or contact your local Emerson Sales Representative



PLANTWEB ADVISOR FOR METROLOGY

Smart Meter Verification is an easy-to-use, automatic diagnostic tool that checks the entire Coriolis meter's performance and integrity – and without ever having to stop your process flow. Integrated with Plantweb Advisor for Metrology, there is no need to even go to the field.

Some of the features of the Coriolis Smart Meter Verification to help manage uncertainty:

- No process or measurement interruption; keep your operation running
- Total meter check – flow tubes, signal processing, electronics – for complete confidence in your devices
- On-demand test results or scheduled auto-run test results give you the information you need
- Definitive pass/fail test results; eliminates the need for expert interpretation
- Integrated into your Plantweb Advisor for Metrology Platform where the reports are stored and can be accessed

Smart Meter Verification
Structural Integrity Method

FAIL

Instrument Owner	John Smith	Contact Name / Tested By	Peter Daniel
Company	ABC Corp	Telephone	+44 1234 4567
Location	Aberdeen	Customer Signature	
Application / Service	Crude		

Meter Information

Transmitter Tag	FT 1632	Sensor Model	CMF5015
Transmitter Model	5700 Configurable I/O	Sensor Serial no.	14567223
Transmitter Serial No.	12116423		
Core Processor Unique ID	3178623		

Test Results

Meter Verification Run Counter: 124

Meter Verification	Status
Tube Stiffness / Integrity	FAIL
Transmitter / Electronics	PASS
Sensors	PASS
Other Alarms	PASS
Critical	PASS

NOTE: All meters are factory calibrated in NIST traceable labs certified to ISO-17025 and 9001. Smart Meter Verification (Structural Integrity Method) complies with numerous global organizations such as ISO, Exida (IEC), ADA-11, API MPMS Ch 14.9, USA EPA, and API Q1, 9th edition.

BACKGROUND

A Coriolis meter has no moving parts and there is nothing to wear or break. Therefore, in a clean fluid, the expectation is that the meter will never exhibit a change in calibration. However, fluids that corrode or erode the flow tube will alter the mechanical characteristics of the meter and will change the meter's calibration. The most important mechanical characteristic related to meter calibration is the structural stiffness. When corrosion or erosion occurs, the meter stiffness changes, and this affects the calibration of the meter. Other mechanical damage (e.g., an overpressure event) will also affect the flow and density calibrations. The Structural Integrity method of Smart Meter Verification measures the mechanical characteristics of the meter to a very high accuracy. When a change in the tube stiffness is detected, Smart Meter Verification determines whether the meter performance remains within factory specifications.

Smart Meter Verification Report

The Emerson logo is a trademark and service mark of Emerson Electric Co.
Rosemount is a registered trademark of one of the Emerson family of companies.
All other marks are the property of their respective owners.
©2023 Emerson Electric Co. All rights reserved.

00807-1000-4541 Rev AA

